

## CLAIMS

What is claimed is:

Sub B17  
1 1. A method for achieving high bit densities in a direct-sequence CDMA spread  
2 spectrum communication system, the method comprising the steps of:  
3 storing a table of orthogonal pseudo-noise codes; ✓  
4 partitioning the table of orthogonal pseudo-noise codes into at least one codebook; ✓  
5 assigning a first codebook to a first user;  
6 spreading a first information signal for the first user with a first pseudo-noise code  
7 contained within the first codebook.

1 2. The method of claim 1 wherein the location of the first pseudo-noise code  
2 within the first codebook corresponds to the value of the first information signal for the first  
3 user.

Sub C2  
1 3. The method of claim 1 further comprising the step of:  
2 spreading a second information signal for the first user with a second pseudo-noise  
3 code contained within the first codebook.

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1           4.     The method of claim 3 wherein the location of the second pseudo-noise code  
2     within the first codebook corresponds to the value of the second information signal for the  
3     first user.

1     Sub C3 5.    The method of claim 1 further comprising the steps of:  
2           assigning a second codebook to a second user;  
3           spreading a first information signal for the second user with a first pseudo-noise code  
4     contained within the second codebook.

1           6.     The method of claim 5 further comprising the step of:  
2           spreading a second information signal for the second user with a second pseudo-noise  
3     code contained within the second codebook.

1           7.     The method of claim 6 wherein the location of the second pseudo-noise code  
2     within the second codebook corresponds to the value of the second information signal for the  
3     second user.

1     Sub CA 8.    The method of claim 1 further comprising the step of:  
2           despreading the first information signal for the first user with the first pseudo-noise  
3     code within the first codebook.

1           9.     The method of claim 8 wherein the location of the first pseudo-noise code  
2     within the first codebook corresponds to the value of the first information signal.

1     ~~Sub 10.~~     The method of claim 1 wherein the partitioning the table of the orthogonal  
2     pseudo-noise codes further comprises the step of:  
3                 partitioning the table into codebooks such that there are  $2^n$  entries, where n is a  
4     whole number.

1     ~~Sub A1~~     11.     The method of claim 1 wherein a single pseudo-noise code is capable of  
2     transmitting multiple bits of information signal.

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